



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-7424; Directorate Identifier 2015-NM-173-AD]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Airbus Model A330-200, -200 Freighter, and -300 series airplanes; and Model A340-200, -300, -500, and -600 series airplanes. This proposed AD was prompted by a determination that, due to significant differences among all airspeed sources, the flight controls will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) will automatically disconnect, and the flight director (FD) bars will be automatically removed. Then, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of the AP and A/THR. In some cases, however, the AP orders may be inappropriate, such as possible abrupt pitch command. This proposed AD would require a software standard upgrade (modification or replacement) of the three flight control primary computers (FCPCs). We are proposing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery:
 - Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7424; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-7424; Directorate Identifier 2015-NM-173-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2015-0124R1, dated February 2, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A330-200, -200 Freighter, and -300 series airplanes; and Model A340-200, -300, -500, and -600 series airplanes. The MCAI states:

It was determined that, when there are significant differences between all airspeed sources, the flight controls of an Airbus A330 or A340 aeroplane will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) automatically disconnect, and the Flight Directors (FD) bars are automatically removed. Further analyses have shown that, after such an event, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of AP and A/THR. However, in some cases, the AP orders may be inappropriate, such as possible abrupt pitch command. In order to prevent such events which may, under specific circumstances, constitute an unsafe condition, EASA issued AD 2010-0271 [which corresponds to FAA AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011)] to require an amendment of the Airplane Flight Manual (AFM) to ensure that flight crews apply the appropriate operational procedure.

Since EASA AD 2010-0271 was issued, new Flight Control Primary Computer (FCPC) software standards

were developed that inhibit autopilot engagement under unreliable airspeed conditions. Consequently, EASA issued AD 2011-0199 (later revised) [which corresponds to FAA AD 2013-19-14, Amendment 39-17596 (78 FR 68347, November 14, 2013)] for A330 and A340-200/300 aeroplanes, and AD 2013-0107 [which also corresponds to FAA AD 2013-19-14], for A340-500/600 aeroplanes to require a software standard upgrade of the three FCPCs by either modification or replacement.

Since EASA AD 2011-0199R1 and AD 2013-0107 were issued, new FCPC software standards, as specified in Appendix 1 of this [EASA] AD, were developed to correct aeroplane behaviour in case of undetected erroneous (Radio Altimeter) RA information and to introduce other improvements. In addition, the new FCPC software standards implement enhanced Angle of Attack (AOA) monitoring in order to better detect cases of AOA blockage, including multiple AOA blockage.

For the reasons described above, EASA issued AD 2015-0124 to require the latest software standard upgrade of the three FCPCs, by either modification or replacement.

At the time [EASA] AD 2015-0124 was issued, some of the Airbus SBs listed in Appendix 1 were not available. Since, some have been published, and for this reason, this [EASA] AD is revised to introduce the date of publication of these SBs.

There are still two SBs that remain unavailable at this time. It is expected that this [EASA] AD will be revised again when these SBs are published.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7424.

Related Service Information under 1 CFR part 51

We reviewed the following service information:

- Service Bulletin A330-27-3205, Revision 02, dated March 23, 2016.
- Service Bulletin A320-27-3207, dated June 30, 2015.
- Service Bulletin A340-27-4195, dated November 24, 2015.
- Service Bulletin A340-27-4196, dated November 24, 2015.

The service information describes procedures for upgrading (replacing or modifying) the software standards for the FCPCs. The service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

Differences Between this Proposed AD and the MCAI or Service Information

Paragraph (7) of EASA AD 2015-0124R1, dated February 2, 2016, is specific to Model A330 airplanes that were modified in service to a multi-role transport tanker (MRTT) configuration using Airbus Service Bulletin A330-27-3156. This Model A330 is

not type-validated by the FAA. Therefore, we have not included the provisions for the Model A330 MRTT airplanes in this proposed AD.

Costs of Compliance

We estimate that this proposed AD affects 92 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification/replacement	3 work-hours X \$85 per hour = \$255	Not available	\$255	\$23,460

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all available costs in our cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Airbus: Docket No. FAA-2016-7424; Directorate Identifier 2015-NM-173-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects the ADs identified in paragraphs (b)(1), (b)(2), (b)(3), and (b)(4) of this AD:

(1) AD 2012-08-02, Amendment 39-17018 (77 FR 24829, April 26, 2012) (“AD 2012-08-02”).

(2) AD 2013-03-06, Amendment 39-17341 (78 FR 15279, March 11, 2013) (“AD 2013-03-06”).

(3) AD 2013-05-08, Amendment 39-17380 (78 FR 27015, May 9, 2013; corrected August 29, 2013 (78 FR 53237)) (“AD 2013-05-08”).

(4) AD 2013-19-14, Amendment 39-17596 (78 FR 68347, November 14, 2013) (“AD 2013-19-14”).

(c) Applicability

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(7) of this AD, all manufacturer serial numbers.

- (1) Model A330 -223F and -243F airplanes.
- (2) Model A330-201, -202, -203, - 223, and -243 airplanes.
- (3) Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes.
- (4) Model A340-211, - 212, and -213 airplanes.
- (5) Model A340-311, -312, and -313 airplanes.
- (6) Model A340-541 airplanes.
- (7) Model A340-642 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Reason

This AD was prompted by a determination that, due to significant differences among all airspeed sources, the flight controls will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) will automatically disconnect, and the flight director (FD) bars will be automatically removed. Then, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of the AP and A/THR. In some cases, however, the AP orders may be inappropriate, such as possible abrupt pitch command. We are issuing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) New Software Standard Upgrade for Model A330 Series Airplanes, and Model A340-200 and -300 Series Airplanes

At the applicable time specified in figure 1 to paragraph (g) of this AD: Upgrade (by modification or replacement, as applicable) the three flight control primary computers (FCPCs), as specified in figure 1 to paragraph (g) of this AD, in accordance with the Accomplishment Instructions of the applicable service information specified in paragraphs (h)(1), (h)(2), (h)(3), and (h)(4) of this AD, except for Model A340-500 and -600 series airplanes with hardware standard FCPC 2K2, do the upgrade in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA).

Figure 1 to paragraph (g) of this AD – *Software Standard Updates and Compliance Times*

Software Standard	Hardware Standard	Compliance Time After Effective Date of this AD
P13/M22	FCPC 2K2	Within 9 months
P14/M23	FCPC 2K1	Within 9 months
M23	FCPC 2K0	Within 9 months
L24	FCPC 2K1 or 2K0	Within 15 months
L23	FCPC 2K2	Within 15 months
W13	FCPC 2K2	Within 15 months

(h) Service Information

For the upgrade required by paragraph (g) of this AD, applicable service information is identified in paragraphs (h)(1), (h)(2), (h)(3), and (h)(4) of this AD.

(1) For Model A330 airplanes with hardware standard FCPC 2K2: Airbus Service Bulletin A330-27-3205, Revision 02, dated March 23, 2016.

(2) For Model A330 airplanes with hardware standard FCPC 2K1 or FCPC 2K0: Airbus Service Bulletin A330-27-3207, dated June 30, 2015.

(3) For Model A340-200 and -300 series airplanes with hardware standard FCPC 2K0 or FCPC 2K1: Airbus Service Bulletin A340-27-4195, dated November 24, 2015.

(4) For Model A340-200 and -300 series airplanes with hardware standard FCPC 2K2: Airbus Service Bulletin A340-27-4196, dated November 24, 2015.

(i) Removal of Certain Airplane Flight Manual (AFM) Requirements

After accomplishing the FCPC upgrade required by paragraph (g) of this AD, the AFM operational procedures required by the AFM revisions identified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD are no longer required and can be removed from the AFM for that airplane only.

(1) The AFM revision required by paragraph (g) of AD 2013-03-06.

(2) The AFM revision required by paragraph (g) of AD 2013-19-14.

(3) The AFM revision required by paragraph (h) of AD 2013-19-14.

(j) Removal of Certain Other AFM Requirements

Accomplishing the FCPC upgrade required by paragraph (g) of this AD terminates the dispatch limitations required by paragraphs (g), (h), and (i) of AD 2012-08-02 for that airplane only, and after accomplishing the FCPC upgrade, those dispatch limitations can be removed from the AFM for that airplane only.

(k) Certain Actions Required by AD 2013-05-08 Affected by this AD

Accomplishing the FCPC upgrade required by paragraph (g) this AD constitutes compliance with the requirements of paragraph (l) and paragraphs (o)(1) through (o)(4) of AD 2013-05-08.

(l) Certain Actions Required by AD 2013-19-14 Affected by this AD

Accomplishing the FCPC upgrade required by paragraph (g) this AD constitutes compliance with the requirements of paragraphs (i) and (j) of AD 2013-19-14.

(m) Airplanes Excluded from Certain Requirements

For Airbus Model A330 series airplanes having Airbus Modification 202680 (installation of FCPC 2K2 with software standard P13/M22) incorporated in production: The actions specified in paragraph (g) of this AD are not required, provided it can be positively determined that since the date of issuance of the original certificate of airworthiness or the original export certificate of airworthiness, no FCPC has been replaced on that airplane with an FCPC having an earlier standard.

(n) Credit for Previous Actions

This paragraph provides credit for the applicable actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A330-27-3205, dated March 9, 2015; or Airbus Service Bulletin A330-27-3205, Revision 01, dated July 3, 2015; which are not incorporated by reference in this AD.

(o) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM 116, Transport Airplane Directorate, FAA, 1601 Lind

Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149.:

Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(p) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2015-0124R1, dated February 2, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-7424.

(2) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on June 23, 2016.

Dorr M. Anderson,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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